
An Action Report Submitted to the Faculty of the College of Social Sciences in Candidacy for the Degree of Master of Public Administration

The Askew School of Public Administration and Policy

by

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August 1, 2006

Robert Beck, Policy Advisor
Office of the Senate President
The Capitol, Room #409
Tallahassee, Florida 32399-1100

Dear Mr. Beck:

I am pleased to present you with “Renewable Energy: Proposing Best Practices for Florida’s Fuel Policy.” This report is the result of an extensive analysis of current and proposed innovations as reviewed by the academic and professional communities. It offers a set of criteria, based on those best practices, for government use in developing sustainable sources of energy for Florida’s future.

During the last quarter century, our nation has worried about how to continue providing fuel and other resources for its citizens. This issue has been particularly important in Florida because it depends almost exclusively on other states and countries for its oil supplies even though it ranks third nationally in total energy consumption. This serves as a reminder that fossil fuel plays a significant role in our state’s economy and that a novel approach to energy policy is needed to sustain its growth and development.

After analyzing three models for Florida’s fuel policy, it is my recommendation that our state work toward an ethanol-hybrid approach. This model relies on Florida’s citrus crop to provide a ready source of cheap and reliable fuel, freeing us of dependence on fossil fuels, creating new jobs and industries, and serving as a model for other states.

As the Legislature continues to examine the issues affecting this state, I encourage you to review the proposed policy within this document. Because the demand for alternative fuels is likely to increase in the near future, it is important to enact best practices that will help our state succeed in this area. The Alternative Model described in this report moves administrators one step closer to this goal by looking for new ways to further our state’s economic growth and success.

Sincerely,

s/ Nicholas Merlin,
M.P.A. Candidate,
Florida State University, 2007
# TABLE OF CONTENTS

EXECUTIVE SUMMARY ........................................................................................................... 3

Chapter

I. PROBLEM STATEMENT .......................................................................................................... 5

II. BACKGROUND AND LITERATURE REVIEW ..................................................................... 6

   Part One ........................................................................................................................................... 6
   A. History and Development of Energy ....................................................................................... 6
   B. Fossil Fuels and Traditional Alternatives ................................................................. 7

   Part Two – Florida’s Energy Problem: Symptoms of a National Trend ......................... 9
   A. Population Boom in the Sunshine State ............................................................................... 9
      a. Needs Associated with Development ............................................................................. 10
      b. Environment and the Energy Crisis .............................................................................. 11
   B. Innovation in Florida ............................................................................................................. 13
   C. Novel Approaches in Other States ..................................................................................... 15
      a. Corn Power Put to the Test ......................................................................................... 15
   D. Solutions Abroad .................................................................................................................. 17
   E. Road Ahead ............................................................................................................................ 17

III. RESEARCH METHODOLOGY AND EVALUATIVE CRITERIA .................................................. 18

IV. POLICY OPTIONS ................................................................................................................ 19

   Option #1: Status Quo Model ................................................................................................. 20
   THE STATUS QUO MODEL: A SUMMARY BASED ON CRITERIA ........................................ 21
   Option #2: Middle Ground Business Model ........................................................................... 23
   MIDDLE GROUND MODEL: A SUMMARY BASED ON CRITERIA ...................................... 23
   Option #3: The Alternative Model .......................................................................................... 25
   THE ALTERNATIVE MODEL: A SUMMARY BASED ON CRITERIA .................................... 26

V. CONCLUSION/RECOMMENDATION FOR ACTION ................................................................ 28

   TABLE 1. BEST PRACTICES FOR ALTERNATIVE FUELS: MODEL OPTIONS .................. 28

VI. WORKS CONSULTED ............................................................................................................. 30

VII. PRESS RELEASE .................................................................................................................. 33
EXECUTIVE SUMMARY

PROBLEM: Florida Could Benefit From Best Practices for Alternative Fuels

Despite Florida’s growth over the past several decades, lawmakers have been relatively successful in sustaining our state’s economic development. However, as the population continues to grow, and the dangers of hurricanes and new disasters loom on the horizon; as the environment becomes a greater concern; and as overseas markets threaten to drive up the price of oil and other fossil fuels, Florida must look to alternative sources of energy. The purpose of this report is to recommend a set of criteria, based on best practices, to help our state continue to be successful.

ALTERNATIVE ENERGY AS A GROWING NATIONWIDE TREND

Florida’s future lies in finding cheap and sustainable fuel for its citizens and businesses. Many states have already begun exploring options, from corn farmers in Iowa to the developers of wind power in California and automakers in Michigan. The literature in this report will explore the growing demand for alternative energy, including feasibility in Florida and overall effectiveness.

RESEARCH METHODOLOGY AND EVALUATIVE CRITERIA

In order to understand and develop viable alternatives to fossil fuel, I conducted an extensive literature review of new articles, legislative proposals, reports, scholarly articles, books, and electronic media. Authors of the literature included members of the professional and academic communities. I used a qualitative approach, selecting material if it provided insight into new sources of energy or if it was able to clarify established practices. Based on my research, I created three policy model options to provide state leaders with some suggestions for Florida’s fuel strategies.

MANAGEMENT POLICY OPTIONS

Three policy model options were developed to address Florida’s best practices for alternative fuels. They are:

- **Status Quo Model: A Continuation of Past Practices**: Allows leaders to continue using fossil fuels and not to change their current policies. Professionals are free to make recommendations which appear pleasing to the public but actually do little or nothing at all. Although this model will not increase costs in the short run, the long-term effect of administrative inaction may inhibit Florida’s economic growth and development.

- **Middle Ground Business Model**: Provides economic incentives for some of the less popular alternatives such as nuclear power or natural gas and recognizes the need for different types of energy. However, this model merely substitutes one harmful type of energy for another and downplays the risks and costs associated with them. Under this model, administrators may be constrained by strict federal and state regulations, but they may also suffer political criticism from the electorate who do not want a reactor built in their backyard or drilling off the coast.
• **The Alternative Model:** Establishes a clear policy for the testing, re-testing, and implementing bio-fuels and clean burning energy. This model heavily invests time and money in the development of such technologies and requires them to be both environmentally and technologically sound. It also entails the creation of a new bio-fuel industry to accompany those developments. As a result, leaders will face greater political and economic challenges than the other models because of the need to collaborate with multiple stakeholders and levels of government but will provide greater input and interaction from the participants.

Each of these models was evaluated based on a set of five criteria: value-seeking for citizens, taxpayers, and businesses; political and administrative feasibility; accountability; administrative/professional freedom, and freedom from political coercion or influence.

**RECOMMENDATION**

The *Alternative Model* presents the best option for securing new sources of energy that would sustain our state’s growth and success. This option recognizes the need for clean fuel in the second model but goes one step further by making sure that it is environmentally friendly. Moreover, it creates a new industry where none previously existed. Thus, it gives administrators professional freedom to implement new decisions, but it also provides reasonable limitations and accountability through public input. Further, the cost of implementing a bio-fuel program would be offset by the value to taxpayers for many years to come. Consequently, since this model takes the satisfaction of all stakeholders into account, it is the “best practice” for our state’s government.
I. PROBLEM STATEMENT

Within the past several decades, the number of people moving to Florida has grown to record levels, and leaders have faced a crisis over energy consumption and the availability of cheap, sustainable fuel sources. By 2025, some experts have reported that the state’s population is expected to more than double.¹ Within the same period, Florida’s need for electrical generation is predicted to grow by approximately 58 percent, and the demand for gasoline is already growing to 300 million gallons per year.² Although our state currently ranks near the top in the amount of energy that it consumes, it produces less than one percent of its own oil. Instead, it relies on other states and countries to provide the resources it needs. However, when disaster strikes, Florida often finds it difficult to meet the demands of its citizens, leaving policymakers and administrators with the dilemma of how or where to get appropriate fuel supplies.

After Florida experienced devastating hurricanes in 2004 and 2005, lawmakers began to consider different options for the state’s energy policy, which included a serious examination of alternative fuels such as ethanol, bio-diesel, and gas hybrid technology. On January 12, 2006, Charles Bronson, Commissioner of Agriculture and Consumer Services, addressed the Florida Senate to discuss the implications of citrus canker. He suggested that discarded husks and other crops could be used to create a new industry and ultimately provide a self-sustaining source of fuel. This would not only alleviate the energy crisis, but it would create jobs and pave the way for further economic investments in our state. At the same time,

² See Staff Analysis of Florida Senate Ways and Means Committee on SB 888, and Governor Bush’s Executive Order, 05-241, issued November 9, 2005.
though, it would require state leaders to seek funding from the federal government and work with private companies such as Ford or General Motors to build cars and engines capable of supporting such an industry. Although this idea has carried relatively little weight in the United States, it has met with great success in countries like Brazil, which is completely independent of foreign fuel sources. In that sense, Florida could be a national pioneer, ushering in a new era of development and innovation. On the other hand, such a proposal may be a political ploy, signaling a return to fossil fuels, investments in dangerous projects such as nuclear power, or simply nothing at all. In any event, energy will play a key role in Florida’s future, and our state’s leaders must make a decision soon.

II. BACKGROUND AND LITERATURE REVIEW

Part One

A. History and Development of Energy

Throughout history, people have used various forms of energy to survive. One of the earliest sources was wood, which is still used as fuel to cook, provide heat, store food and even produce charcoal. People also used animals as vehicles and other tools. Horses, for example, not only moved passengers and goods but also powered mills and were even used for oil, grease, and fat. Likewise, people relied on themselves to power vehicles such as boats, bicycles, or carts. Eventually, man learned how to refine coal and oil for the combustion used in trains, automobiles, and other forms of transportation.

Over the years, people have also used other forms of energy such as water power, which relies on the energy produced by fast-moving currents from rivers and tides. In the modern era, this type of power has been used to generate
hydroelectricity, which is a relatively inexpensive method of storing and providing energy. Likewise, wind power has been used to meet energy needs. For the past several hundred years, it was used to operate windmills such as those seen in Europe to pump water or power smaller ones. Recently, California and a number of Midwestern states developed wind generation farms for commercial use, powering turbines to bring electricity to outlying communities. In a similar fashion, some desert regions and states along the sunbelt have begun using solar energy to provide homes with heat and power. However, it was not until the twentieth century that this option was fully explored, either through architecture or electrical conversion systems.

B. Fossil Fuels and Traditional Alternatives

a. Two Theories

Since the Industrial Revolution, most people have depended upon fossil fuels as their primary sources of power. These resources commonly refer to scarce mineral deposits such as coal, oil, petroleum, or natural gas and are used to provide transportation, heating, electricity, and even materials such as plastic. However, despite those benefits, the byproducts of fossil fuels have been known to produce harmful greenhouse gases, prompting some leaders to consider alternative sources of energy.

The traditional theory on the origin of fossil fuels is that they are the altered remnants of ancient plant and animal life which were deposited in sedimentary rocks; they were formed millions of years ago and have rested there ever since that time. A competing theory is that crude oil and other fossil fuels come from non-
biological sources called hydrocarbons or possibly microbes located deep within the Earth. Under that premise, some scientists have speculated that additional sources of petroleum may exist in underground caverns in oceans. Regardless of the theory, though, most policymakers have continued to debate how to obtain more of such fuels at the cheapest price.

b. Renewable Energy

Unlike fossil fuels, certain types of energy are nearly inexhaustible and do not directly produce harmful emissions. These fuels are considered renewable because they are replaced rapidly by a natural process such as the sun or the wind. Although most renewable energy comes from short-term solar-energy storage such as rainfall, it can also be accumulated over a period of months, as in straw or hay, or through many years as in trees or wood. Thus, using renewable energy does not permanently deplete those resources. In contrast, fossil fuels are theoretically renewable on a very long time-scale, but realistically, they are removed at a higher rate than it takes to replenish them.

When the term renewable was introduced, it was a generally held belief that our planet’s sources of fossil fuels would be depleted within fifty years. Since then, large deposits of oil have been found, which has extended this timetable. However, because the current rate of consumption exceeds the rate of renewal, policymakers are concerned about whether they will run out of fossil fuels. If, on the other hand, renewable fuel sources became more widespread, electric power transmission and electricity distribution systems might no longer be the main distributors of electrical energy but would operate to balance the electricity needs of local communities. In
that sense, those with surplus energy would be able to sell to needier areas. From an administrative perspective, this would require active participation and collaboration among managers to ensure that proper balancing occurs within the system. Some state governments such as California are moving to address this issue, but much remains to be done. One potential solution is to train managers to be more active in the energy distribution market, which will require significant changes in the way that such networks are viewed operated.

On a smaller scale, it is easier for renewable energy to be produced locally or by an individual consumer because it lowers the requirements that electrical systems have to fulfill. While the cost of an individual unit is not yet affordable to most people, studies have shown that an average household with a solar panel and an energy storage system of the right size only needs electricity from outside sources for a few hours every week. As a result, advocates of renewable energy believe that distribution systems will become more smaller and less costly, although Florida has only recently begun to examine these options with tax credits and rebates. Likewise, fuel-efficient transportation has emerged as a priority after many years of sitting on the political backburner, but it will be a long time before either goal is fully realized.

Part Two – Florida’s Energy Problem: Symptoms of a National Trend

A. Population Boom in the Sunshine State

a. Needs Associated with Development

According to scholars, for much of Florida’s early history, it was primarily an agricultural state with issues no different from those facing many other southern states.\(^3\) In 1900, most of the population lived within fifty miles of the Georgia

border, although no one could have predicted the changes that would take place within the next hundred years. Beginning in the 1920’s, Florida faced a population explosion when investors began to speculate in swampland and previously undeveloped areas. As people rushed into the state to take advantage of the boom, the population shifted to South Florida. While, the boom did not last, its collapse foreshadowed the stock market’s crash in the rest of the nation. Wracked by the Great Depression and the land bust, Florida became essentially a ward of the state as the New Deal kept the state afloat with federal projects and military bases. However, when the United States prepared itself for war with Germany and Japan, Florida became a hub for training troops and other related activities, which reinvigorated its economy.

Since World War II, Florida has welcomed an average of 980 people a day, a number which continues to grow. This trend has led one scholar to comment that growth management is one of the most important issues affecting the state. “It’s like we are building a new city of Tampa each year.” (Interview with Professor and Former Governor Reubin O’D Askew, April 19, 2006). Overall, within the next quarter century, experts have predicted that the state’s population will double. This means that the demand for goods and services consumed by those people is also expected to increase, including adequate health care, schools, roads, transportation, and of course, fossil fuel.

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4 Coburn and deHaven-Smith’s *Megatrends*. Compare the state’s population, which grew from the region’s smallest in 1880 (29,492) to its largest in 2000 (15,982,378).
5 Book Review of *Florida’s Megatrends* by Gordon Harvey, Professor, Department of History and Government, University of Louisiana at Monroe.
6 See Governor Bush’s Executive Order, 05-241, issued November 9, 2005. Compare the period between 1945 and 1960 when the number of people entering the state was 558 per day. See Coburn and deHaven-Smith, *Megatrends*. 
b. Environment and the Energy Crisis

By the end of the 1990’s, Florida saw growth in some sectors of its economy, such as technology, although it continued to depend on tourism and low-paying service-industry jobs. After September 11, 2001, Florida’s luck changed again; its businesses and agricultural producers suffered financial reversals, and lawmakers in Tallahassee began to worry about our state’s economic prospects. At the same time, they were also concerned about the environment, protecting features which were important not only for tourism but for growth management and development. However, as one eminent scholar noted, this has not always been the case; “the tension between humans and their ecosystem is no greater anywhere than in a state that sells itself as a scenic paradise but relies on a constant stream of visitors to sustain its economic viability.”

Within the last two years, Florida has suffered catastrophic natural disasters, events which many scientists attribute to the rise of global warming and greenhouse gases. In the aftermath of Ivan, Charlie, and the Gulf Coast Hurricanes, Katrina and Wilma, the price of crude oil rose from $25 a barrel to almost $60, a surge caused by damage to offshore refineries and conflicts in the Middle East. Since that time, the price of crude has fluctuated but has shown no sign of decreasing. For example, in April, 2006, oil reached a record price of $75.35 per barrel due in part to Iran’s nuclear crisis. Faced with such an overwhelming array of problems, administrators in Florida throughout the country have found it difficult to meet the demands of their citizens and began searching for long-term solutions.

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7 See David Coburn and Lance deHaven-Smith, Florida’s Megatrends (2002).
8 See Book Review by Gordon Harvey cited above.
9 See http://en.wikipedia.org
11 Id.
On November 9, 2005, Governor Jeb Bush, in response to public outcry over the hurricanes and the high price of oil, signed Executive Order 05-241, which recognized that Florida must have an adequate, reliable, diverse, efficient, and affordable energy supply to ensure our economy’s continued growth and prosperity. It also required the Department of Environmental Protection (“DEP”) to develop a comprehensive plan for evaluating the state’s current and future demand and to host the 2005 Florida Energy Forum to address the barriers and diversification of such needs. As a result of that order, DEP met with other agencies, interests, and organizations\(^\text{12}\) to make recommendations and proposals for policymakers during the Legislative Session. In January, 2006, Commissioner Bronson addressed the Senate’s Committee on General Government Efficiency in Tallahassee, where he discussed some of the issues relating to the fuel crisis. Several days later, the attendees at the Energy Forum submitted a report, which came to be known as *Florida’s Energy Plan*,\(^\text{13}\) providing grants for the research and development of alternative fuels, giving consumer rebates for energy-efficient appliances, proposing corporate tax credits and economic incentives for the manufacture of fuel cell technology, and setting long-term guidelines for new power plants.

Ultimately, the Legislature responded to the *Energy Plan* with SB 888, which was designed to respond to many of the issues listed above; the bill passed both Houses and was ordered engrossed and enrolled. Regrettably, though, despite the commendable efforts of lawmakers to provide a solution, SB 888 was more important for what it did not say; namely, while it addressed some aspects of the

\(^{12}\) Department of Agriculture and Consumer Services, the Public Service Commission, the U.S. Department of Energy, the National Nuclear Safety Administration, state legislators, environmentalists, and businesses.

\(^{13}\) See http://www.dep.state.fl.us/energy. *See also* Staff Analysis to SB 888, page 3.
energy problem,\textsuperscript{14} it became a vehicle for officials to lower the petition restrictions for nuclear power plants and competitive bid requirements rather than heavily investing in alternative fuels and technology. Further, while the Legislature provided five million dollars in grants to those people or groups that use alternative energy, it invested little, if any, money in the construction of bio-facilities from which private entrepreneurs could create an industry. In that sense, Florida’s leaders put the cart before the horse or, rather, they lost the trees for the forest; they recognized the need to find a diverse supply of energy but became bogged down by the demands of multiple interests, a move which will undoubtedly affect our future.

\textbf{B. Innovation in Florida}

When Commissioner Bronson spoke in front of the Legislature,\textsuperscript{15} he said that Florida could become a national pioneer in bio-fuel technology. “A bio-fuel is any fuel that derives from biomass, which comes from recently living organisms or their metabolic byproducts such as manure from cows.”\textsuperscript{16} Unlike petroleum, oil, and nuclear power, bio-fuel is considered to be a renewable form of energy and most kinds can be stored for an indefinite period of time without any danger.\textsuperscript{17} Ironically, scientists at the University of Florida helped develop this technology more than a

\textsuperscript{14}SB 888 created the Florida Energy Commission out of DEP to develop recommendations for legislation on a state energy policy. It also created a new statutory section to provide financial incentives for renewable energy technologies, energy efficient appliances, solar energy, bio-diesel and ethanol, and biomass. See Fla. Stat. 377.801-806. See also Fla. Stat. 212.08 (tax exemption for renewable energy)

\textsuperscript{15}See Florida Senate Committee Packet and Audio Recording of General Government Efficiency Committee, 9:00am – 11:30am, January 12, 2006.


\textsuperscript{17}The two most common forms of bio-fuel are ethanol and bio-diesel. Ethanol is a clean-burning, high octane fuel, which uses corn and other crops produced in a distillery. Bio-diesel uses natural vegetable oils as a power source and can be combined with fossil fuel to create a blend. According to the National Biodiesel Board, a trade association and research developer, stored bio-diesel has a shelf-life of several months and can be flammable is left unattended. See http://www.biodiesel.org/resources/biodiesel Basics/. 
decade ago, but lawmakers lost interest in that discovery because of a “confluence of factors, including geopolitics, weather, and capitalism itself.”

While high gas prices have caused some consumers to change their driving habits or to rely more on public transportation such as the Lynx in Orlando or Tri-Rail along the I-95 corridor in South Florida, commercial manufacturers have yet to invest in any long-term projects. Although a recent news article discussed U.S. Enviro Fuels’ plans to build two ethanol plants at Port of Tampa and Port Manatee, it will be many months or possibly years before they get off the ground. As a consequence, Florida lags behind those states which have already incorporated bio-fuels into their energy market. Instead, there has been immense pressure in Congress to drill for natural gas eight miles off the coast, a move which threatens to affect beaches and tourism, the very things that drive our economy.

C. Novel Approaches in Other States

a. Corn Power Put to the Test

In the Midwest, administrators took a more proactive approach to the alternative fuel problem than Florida. Concerned about the rising price of crude oil and faced with

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18 In 1991, Professor Lonnie Ingram and a team of scientists at University of Florida were awarded a patent for discovering that *E. coli* bacteria could convert plant waste into ethanol. See David Adams, *Fuel Breakthrough Still Sputters*, St. Petersburg Times, December 5, 2005, available at http://www.sptimes.com/2005/12/05/State/Fuel_breakthrough_sti.hml.


21 “After Florida marshaled other coastal states, the [U.S.] House [of Representatives] vote[d], 217-203, to preserve a ban on drilling offshore for natural gas.” Wes Allison, “Drilling Ban Upheld – Barely,” St. Petersburg Times, May 19, 2006. Although policymakers and environmentalists succeeded in upholding the ban this year, it does not prevent lobbyists for off-shore drilling from trying again. See also CNN Money, *China, Cuba Reported in Gulf Oil Partnership*, May 9, 2006, at http://money.cnn.com/2006/05/09/news/economy/oil_cuba/?cn=short (in which Cuba engaged in deals with China and India to allow drilling off its coast, one of the reasons prompting lawmakers to consider coastal drilling in the United States).
pressure from local corn growers about what to do with their surplus crops, political leaders in states such as Iowa and Kansas began working with private companies to create ethanol distilleries. Policymakers likely had several goals in mind when they considered this option: primarily, to alleviate the headache farmers caused them by using their crops for another purpose, producing “endless gallons of . . . a clean-burning, high-octane fuel [while at the same time,] end[ing] the worldwide oil shortage, reduc[ing] emissions that cause global warming, and free[ing] the United States from dependence on foreign energy.” (Wald, *Corn Power*, Page D3). Despite those lofty goals, however, “turning corn into ethanol takes energy. For every gallon that an ethanol manufacturing plant produces, it uses two-fifths of a gallon of fuel (usually natural gas), and that does not count the fuel needed to make fertilizer for the corn, run the machinery or truck the ethanol to the market.” (Wald, *Corn Power*, Page D3). This has led policymakers to question whether “corn-based fuel [is] a harbinger of the energy market, or just a lot of hogwash.” (Hargreaves, *Even Bullish Investors Wary of Ethanol*, at 1).


While pure “corn power” has yet to be used widely at the pumps, a number of states have begun selling gas blended with [eighty-five] percent ethanol, called E-85. However, “[o]f the 170,000 service stations in the United States, fewer than 600 sell [it], although [m]ost American cars can now run on a gas blended with 10-percent ethanol, which is sold at about one-third of the country’s gas stations.” (Burke, *Biofuel Creates Ethanol Distributors*, Page 6E). Last year, in order to warm Americans to the idea of these options, Congress submitted a Joint Resolution entitled, “E-85 Fuel Utilization and

22 Florida has two E-85 stations, one at Hurlburt Field near Ft. Walton Beach and the other at Kennedy Space Center, but both are private facilities that do not allow public access. See National Ethanol Vehicle Coalition website at http://www.e85fuel.com/database/locations.php?state=flFlorida.
Infrastructure Development Incentives Act of 2005.” This measure was designed to encourage the development of so-called Flexible Fuel Vehicles (FFVs), which run on gasoline, alcohol, or any combination of the two, as well as tax incentives and new refueling stations. (See Statement by U.S. Senator Barack Obama to Joint Resolution for S. 918). As a result of that encouragement, American automakers such as “Ford Motor Co. announced that “[they] would pay to help install E-85 dispensers in gas stations in Illinois and Missouri.” (Burke, Biofuel Creates Ethanol Distributors, Page 6E). The reality, though, is that most manufacturers have not aggressively pursued these options for a variety of reasons: first, there is no infrastructure in place with which companies can cooperate or enter into business; second, “[m]otorists and fleet operators electing to purchase cleaner, renewable-based, American-made [E-85] motor fuel [may feel] ‘over taxed’ under many state and local statutes,”23 so there is no market. Moreover, “E-85 [typically contains] 29% less energy than conventional unleaded gasoline, an outcome which does not thrill retailers and would certainly not be attractive to consumers. (National Ethanol Vehicle Coalition Website).

D. Solutions Abroad

While domestic producers have only started to experiment with alternative fuels, their efforts pale in comparison to Brazil, a nation roughly the size of the United States, which has freed itself from foreign oil by using flex cars. “The idea [that a car could run on different fuel sources] goes back to the 1970’s . . . when Brazil’s economy [took a nose-dive], prompting the country’s military dictatorship to launch a campaign to wean the country from expensive, imported oil.” (Associated Press, Brazil Buys Into Flex-Fuel

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Cars). To that end, the “[g]overnment [used] subsidies [to help] fund the design and
manufacture of alcohol-only cars. They also supported a vast industry near São Paolo to
cultivate sugarcane and refine it into alcohol [through] an alcohol distribution network.”
(Associated Press, Brazil Buys Into Flex-Fuel Cars). However, as one analyst noted, in
the United States, “[t]he problem with these flex-fuel vehicles is [that] they need to meet
with an established infrastructure. In the case of Brazil, the fuel was there first.”
(Associated Press, Brazil Buys Into Flex-Fuel Cars). As a result, Brazilians have flex-
fueled cars from Fiat SpA and even an American company, General Motors, a niche
that comprises almost twenty percent of their market. On the other hand, the United
States is years, if not decades, behind in this development, only recently promoting E-85
and other alternatives.

E. Road Ahead

The future of bio-fuels and flex technology in Florida is uncertain, although the
threat of more environmental disasters and the high price of oil may prompt the federal
government to provide incentives for a new era of development, including the tools and
infrastructure needed for that purpose. Ultimately, politicians and public administrators
will have to work with private businesses and stakeholders to consider viable solutions to
the energy crisis or continue to be dependent on foreign fuel. History will be the judge of
their actions.

III. RESEARCH METHODOLOGY AND EVALUATIVE CRITERIA

The main purpose of this Action Report is to create a set of criteria that
constitute “best practices” for Florida’s future fuel policies. In developing this set of

24 According to the Associated Press article, although General Motors sells flex-fuel cars in Brazil, it has
had only limited success with them in the United States because the infrastructure and market are not in
place to support their development.
practices, I conducted a detailed literature review, including books, articles, staff analyses and bills from the Florida Senate, audio tapes, and electronic media. Further, I consulted with members of the academic and professional communities, each of whom offered a different perspective of public administration and contributed specific wisdom about the field. Moreover, the methods used in this report were qualitative since I was purely interested in providing a set best practices rather than analyzing data sets. Based on the information that I reviewed, I selected material if it seemed to describe a sufficiently defensible best practice.  

Each of these models was evaluated based on the following set criteria:

- **Value-seeking for Citizens, Taxpayers, and Businesses** looks at how much benefit stakeholders will get from certain course of action; how well that decision matches with fiscal constraints and limited tax dollars; and how motivated employees are to obtain this value.

- **Political and Administrative Feasibility** addresses whether employees and workers within the current administration have accepted the model; whether adequate technical capabilities are present; and whether an organization has the capacity and resources to implement the model. If they are not, then the model is unlikely to be administratively viable.

- **Political Accountability** considers whether a decision-maker will be held accountable to stakeholders. In other words, this criteria reflects on who citizens can point their fingers at when things do not work according to plan.

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25 “Best Practice” is a term which refers to the best strategy for Florida’s energy needs when compared with evaluative criteria such as value-seeking for citizens, taxpayers, and businesses; political and administrative feasibility; political accountability; administrative and professional freedom; and possibility of political coercion or influence.
• *Administrative and Professional Freedom* examines the amount of control that policymakers and public managers have in the implementation of a program based on their knowledge and expertise. It also looks at how free leaders and administrators are to make decisions without fear of reprisal or job security.

• *Freedom from Political Coercion or Influence* examines how much pressure is placed on administrators within the organization and from external manipulation, whether it is from the public, higher levels of management, or the government itself.

### IV. POLICY OPTIONS

The key to Florida’s future energy policy is to develop a set of workable criteria to aid our leaders in making the best decisions. While it is impossible to devise a set of criteria applicable to every jurisdiction in the country, Florida’s fuel crisis is similar enough to other states that their governments can look to us as an example. Using the evaluative criteria indicated earlier, I developed three model options which Florida’s leaders can use to guide themselves toward a successful energy strategy, including conservation, and development. The three models are: (1) the Status Quo Model, which we can also call the Traditional or Static Model; (2) the Middle Ground Model; and (3) finally, the Alternative or Innovative Model. Each model contains characteristics that are indicative of what scholars, professionals, and policymakers have described about our state’s energy policy. The Alternative Model is an outgrowth of the first two models, combining the best elements of each into a single concept.

In analyzing each of the proposed models, I assigned values of “low,” “medium,” and “high” to the individual criterions to help determine which model displayed the best
best energy policies. A “low” value indicates a negative or highly undesirable feature within an option. On the other hand, a “medium” ranking indicates moderate but acceptable features, while a “high” value indicates positive or highly desirable features. Table 1, which illustrates all values associated with the option models, is presented in the conclusion to this report. The contents of each individual model are discussed in detail in the pages that follow.

Option #1: Status Quo Model

The Status Quo Model is perhaps the easiest model to explain because it describes a reliance on past practices. It is less introspective and knowledge-based than the other models because managers depend on a prescribed set of rules to tell them how to behave. In that sense, the hierarchical nature of this model alleviates potential deviation from the goals of the current administration, which is essential to a good organization and a well-functioning government. Moreover, this model assumes that taxpayers are content with the way in which officials have run the government or, that if people are dissatisfied with that conduct, there is a mechanism for airing those grievances. At the same time, though, public managers are less likely to be innovators because it is inconvenient to change established procedures. As such, they may become a professional class of stagnators, serving their own interests, allowing politics to influence how they react, making recommendations that support the current administration, and paying lip service to the public. Ultimately, the key to success under this model is to maintain ties to existing stakeholders and interests; there is no need to seek highly educated managers, only to hire minimally competent ones. Moreover, it is not necessary to pursue or to advertise extensively for new programs because, as the name of the model suggests, administrators
are merely seeking to uphold the status quo. This harkens back to the days of political patronage from the earliest days of our country when managers were chosen based on how well they were connected instead of how much they knew. While this would provide a political comfort zone and a perception of strategic stability, the long-term effect of inaction may inhibit Florida’s economic development and the quality of life of its citizens.

THE STATUS QUO MODEL: A SUMMARY BASED ON CRITERIA

- **Value Seeking for Citizens, Taxpayers, and Businesses: Medium**

  Since public managers are “stewards of the people,” they are concerned about providing some level of value but, at the same time, they do not want to implement many changes because of politics or convenience. As a result, they may not always provide the best result, which results in a mixed ranking of “medium” for this criterion.

- **Political and Administrative Feasibility: Medium**

  Managers and public employees are aware of their own limitations and are hesitant to venture outside of their comfort zone. This option assumes that managers will follow the path of least resistance, and so they will act when it is administratively feasible to behave in a particular manner. For example, technology such as the Internet can allow administrators to search for energy developments in other parts of the country without leaving Tallahassee. Further, a simple telephone call to a public manager in a sister state can accomplish the same goal. On the other hand, politicians play a part in the oversight process, including the speed with which an administrator makes a decision, regardless of
the technical feasibility. This interference can affect the work environment, which causes this option to earn a “medium” score in this area.

- **Accountability: Medium**

  Like the value seeking option, public managers are concerned about whether they will be accountable for their actions, but this is affected by external factors which are again related to politics. For example, policymakers may promote alternative fuel when it is a popular issue and then hire an administrator to implement the program. If, however, the state experiences a budget short-fall, and the legislature cuts funding to that department, the manager will be forced to work with less resources. In that sense, it becomes less clear who should held accountable when the plan does not work, which results in a “medium” score.

- **Administrative and Professional Freedom: Low**

  Although this option give administrators a prescribed set of rules and procedures for how to act, it leaves little room for variation. As a result, this option does not encourage creativity, leadership, or active management; it provides stability at the cost of innovation, so it receives a “low” score.

- **Freedom from Political Coercion or Influence: Low**

  While many public administrators enjoy civil service protection, leaving them free from political pressure, the reality of state government is that managers depend on politicians to set the agenda and to tell them what to do. As a consequence, public managers have relatively little power other than authority over ministerial concerns; they are susceptible to outside influences and thus receive a “low” score.
Option #2: Middle Ground Business Model

The Middle Ground Model is a hybrid of the first model because although it recognizes that there should be economic incentives for alternative fuels, it allows administrators to return to their comfort zone when the perceived crisis is over. Under this model, administrators may be constrained by strict federal regulations, but they may also suffer political criticism from the electorate who do not want a reactor built in their backyard or drilling off the coast.

MIDDLE GROUND MODEL: A SUMMARY BASED ON CRITERIA

• Value Seeking for Citizens, Taxpayers, and Businesses: Medium

As in the Status Quo Model, managers hold a public trust, and so they should be concerned about providing value for the citizens that they serve. Unlike the previous model, though, this is more of a business model, and so its primary purpose is to create value through tax cuts, rebates, and incentives. Also, politicians become more involved in oversight and decision-making in an effort to boost their own political capital. On the one hand, this may mean more collaboration between policymakers and public managers as they help create tax incentives and consumer rebates for alternative energy. However, this may also mean that politicians “step on the toes” of lower-level administrators who are better trained at obtaining value for citizens, businesses, and taxpayers than untrained elected officials or a central authority. As a result, there is a healthy tension between executive agency heads and the legislative branch, resulting in a higher level “medium” score for this criterion.
• **Political and Administrative Feasibility: Medium**

Employees may be dissatisfied with this model depending on the amount of freedom they are granted to implement the program. Managers and their subordinates are still likely to be hesitant to venture outside of their comfort zone. The primary assumption of this option is that managers will act when time and technology allow them to do so. This requires managers to conduct cost-benefit analyses and to consult with local leaders before implementing a new plan such as whether to build a nuclear power plant. This option once again uses computers for research, face-to-face communication, or telephone calls. Similarly, regulatory agencies and politicians play a part in the oversight process, affecting the speed with which a program is approved, regardless of technology. These limitations are simply part of the work environment, which causes this option to earn a higher “medium” score in this area.

• **Accountability: High**

Since this approach involves the use of taxpayer dollars to provide rebates and incentives, leaders are more likely invest a great deal of political capital and thus have much more to lose if the policy does not have the desired effect. In that sense, this model is different from the status quo, which requires administrators to do nothing at all. Here, all members of government are accountable to the public and to regulatory agencies. Likewise, there is likely to be strict scrutiny from the media and other stakeholders. As a result, this is a more contemporary, business-oriented model, because it allows people to see where their money is being spent and to who is receiving it. More importantly, though, because of
the fiscal and environmental cost that is needed to maintain and establish a nuclear power or drill for natural gas, the danger is much greater. Since, everyone can be held accountable when the plan does not work, this option results in a “high” score.

- **Administrative and Professional Freedom: Low**
  Since nuclear power and off shore drilling are required to comply with strict state and federal regulations, there is little room for deviation. As a result, this option provides stability but is bound by red tape, so it receives a “low” score.

- **Freedom from Political Coercion or Influence: Medium**
  As in the previous model, public administration does not exist in a vacuum, and thus managers must balance between the influence of politicians, interest groups, citizens, and businesses, all of whom have a stake in the outcome. In that sense, public managers and their employees may resent being pulled in so many different directions; they have very little freedom from state or federal mandates, and thus, they receive a “medium” score.

**Option #3: The Alternative Model**

The Alternative Model establishes a clear policy for the testing and implementing new forms of energy. This model heavily invests time and money in the development of such technologies and requires them to be both environmentally and technologically sound. It also entails the creation of a new bio-fuel industry to accompany those developments. As a result, leaders will face greater political and economic challenges than the other models because of the need to collaborate with multiple stakeholders and levels of government but will provide greater input and interaction from the participants.
THE ALTERNATIVE MODEL: A SUMMARY BASED ON CRITERIA

- **Value Seeking for Citizens, Taxpayers, and Businesses: High**
  
  As in the other models, managers are public servants that recognize the need to provide value for the citizens that they serve. Similarly, like the idea taken by the business approach, the Alternative Model requires the involvement of the private sector. However, the hybrid model requires an investment in the technology and infrastructure needed to bring clean burning fuels to the market. Rather than placing less restrictions on existing power plants or granting tax incentives to one segment of the population, this model requires a commitment of time and money, including educating citizens, advertising to consumers, and lobbying to the federal government, to create an ethanol industry in Florida. This means that managers are likely to be forced outside of their comfort zones and become more active in policymaking. As a result, this yields a “high” score for the value-seeking criteria.

- **Political and Administrative Feasibility: Medium**
  
  This option requires public managers to recognize technological limitations while searching for new solutions. As such, it assumes that managers will use all of their resources and skills to find and promote developments in other parts of the country and the world, including grants, tax exemptions, or incentives for those companies that help build an ethanol industry in Florida. Further, it might involve something as innovative as a contest like the one used for the Space Plane in which the first corporation to construct a usable ethanol plant gets a monetary reward. Since this model also assumes that government will fully cooperate, managers are limited by their creativity; thus this option earns a “medium” score.
• **Accountability: High**

  In all of the prior models, we were concerned about which administrator, agency, or level of government to hold accountable. Under the Alternative Model, citizens should look to both the Florida Department of Environmental Protection and the Florida Energy Commission as set forth in Governor Bush’s Executive Order 05-241. Based on that premise, policymakers would not be required to “reinvent the wheel;” they would use Bush’s template to create definable roles, regulations, and responsibilities from which administrators would base their actions, and citizens would correspondingly be clear about who to hold accountable when the plan does not work. As such, this option results in a “high” score.

• **Administrative and Professional Freedom: High**

  Because the Alternative Model requires policymakers and administrators to devise ground-breaking guidelines for our state’s energy policy, there is tremendous room for variation. As a result, this option rewards creativity, leadership, and inventiveness; and so it receives a “high” score.

• **Freedom from Political Coercion or Influence: High**

  This is probably one of the most challenging options for public administrators because many people and interest groups are likely to resist to a change in our state’s energy policies. However, because this model requires policymakers and managers to creative a new incentive structure for people and businesses, there will be less certainty in how to manipulate it by outside influences. Thus, one of the very things that makes this option problematic can also be used to insulate it from political pressure, which gives it a “high” score.
V. CONCLUSION/RECOMMENDATION FOR ACTION

The Status Quo, Middle Ground, and Alternative Models for energy policy were each assessed based on five criteria, which included: (1) value-seeking for citizens, taxpayers, and businesses; (2) political and administrative feasibility; (3) accountability; (4) administrative and professional freedom, and (5) freedom from political coercion or influence. Table 1 summarizes the results of this assessment.

TABLE 1. BEST PRACTICES FOR ALTERNATIVE FUELS: MODEL OPTIONS

<table>
<thead>
<tr>
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<th>STATUS QUO MODEL</th>
<th>MIDDLE GROUND BUSINESS MODEL</th>
<th>ALTERNATIVE MODEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>VALUE-SEEKING FOR CITIZENS, TAXPAYERS, AND BUSINESSES</td>
<td>MEDIUM</td>
<td>MEDIUM</td>
<td>HIGH</td>
</tr>
<tr>
<td>POLITICAL AND ADMINISTRATIVE FEASIBILITY</td>
<td>MEDIUM</td>
<td>MEDIUM</td>
<td>HIGH</td>
</tr>
<tr>
<td>ACCOUNTABILITY</td>
<td>MEDIUM</td>
<td>HIGH</td>
<td>HIGH</td>
</tr>
<tr>
<td>ADMINISTRATIVE AND PROFESSIONAL FREEDOM</td>
<td>LOW</td>
<td>LOW</td>
<td>MEDIUM</td>
</tr>
<tr>
<td>FREEDOM FROM POLITICAL COERCION OR INFLUENCE</td>
<td>LOW</td>
<td>MEDIUM</td>
<td>HIGH</td>
</tr>
<tr>
<td>TOTALS</td>
<td>LOW/MEDIUM</td>
<td>MEDIUM</td>
<td>HIGH</td>
</tr>
</tbody>
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*Ranking Scores: High = Positive/Highly Desirable Feature
Medium = Moderate/Acceptable Feature
Low = Negative/Highly Undesirable Feature*
Based on the managerial options above, I recommend that Florida attempt to utilize those practices outlined in the Alternative Model. Due to its emphasis on value-seeking and accountability as well as feasibility and freedom from political influences, this model takes into account a variety of factors and provides a strong model to follow for our state’s energy policy.

As the price of crude oil reaches new levels, and the threat of hurricanes and other disasters loom over the horizon, our state cannot continue view energy in the same way. The Alternative Model offers a roadmap for achieving a successful strategy by examining what modern innovators around the world are doing to provide the best value for their citizens; Florida must do the same. The Alternative Model recognizes the need for a reliable source of fuel and makes sure that it is not only safe for the environment but administratively feasible, creating a system that makes use of our state’s agriculture. As a result, managers must become active leaders and participants; they must advertise their policies, educate citizens, provide incentives to the private sector, and work closely with the federal government. On a practical level, this means that the freedom to implement certain decisions will be tempered through public input, but it also means a greater stake in the outcome. Realistically, though, since this model touches upon all areas of sound managerial policy, it is the “best practice” for our state. We can ask for no less.


27 See Kevin G. Hall, “Ethanol A Long Way From Replacing Gas,” Florida Times Union, May 21, 2006 (discussing hurdles to ethanol distribution such as the lack of a national pipeline despite the number of vehicles that are capable of using ethanol as a power source).
VI. WORKS CONSULTED


Executive Order, 05-241, issued by Governor Jeb Bush, November 9, 2005, available at

30

Florida Senate Committee Packet and Audio Recording of General Government Efficiency Committee, 9:00am – 11:30am, January 12, 2006.


Florida’s Energy Plan, available online at http://www.dep.state.fl.us/energy.


Statement by U.S. Senator Barack Obama to Joint Resolution for S. 918.


FOR IMMEDIATE RELEASE: August 1, 2006
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Are Florida’s Fuel Policies a Step in the Right Direction?

TALLAHASSEE — A report released earlier today reveals that although Florida has made strides in its fuel policies during the last Legislative Session, it still has a long way to go. While lawmakers in the Capitol have spent many years discussing innovative energy-saving techniques, they have only recently considered legislation that will turn our state into a national pioneer in alternative fuels.

The new report, entitled, Renewable Energy: Proposing Best Practices for Florida’s Fuel Policy,” provides insight into the need for clean, cheap, and diverse sources of energy. The information seeks to get lawmakers and administrators to consider the short-term costs of ethanol, flex-fuel, and renewable technology when compared to the long-term benefits to our state’s economy and future prosperity. The proposed criteria come as a result of extensive research on best practices for energy policy.

Author of the report, Nicholas Merlin, commented, “American car manufacturers have already begun working with the Brazilians to provide flex-fuel cars. It’s time for the government in our country to step up to the plate and begin working with states and businesses to provide not only the best value to citizens and taxpayers but to make us competitive with our neighbors around the world.” Merlin noted that while such developments were bound to take time, “this is the right time to invest in bio-fuels, providing reliable sources of energy for years to come.”

More information can be found at the Florida Fuel Watch, Inc., website at http://www.floridafuelwatch.com/.